



# The secular solutions of the linearized Korteweg-de Vries equation

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| Résumé en anglais     | We study the inhomogeneous linearized Korteweg-de Vries (KdV) equation. It is solved by the inverse scattering transform method. The secular-producing terms on the right-hand side (rhs) are characterized in several ways: first we give a mathematical characterization as resonant terms. Second, the secular-producing terms are interpreted as conserved densities of the KdV equation. Third, it is checked that the removal of all linear terms from the rhs, polynomial in the solution of KdV, ensures the boundness of the solution of the linearized equation. Fourth, considering this solution itself as the rhs, we determine which part of it is secular producing, and which part is not. |
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## Liens

[1] <http://okina.univ-angers.fr/herve.leblond/publications>

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